

INTRODUCTION

The Water Quality Standards & Wastewater Treatment Requirements, the Ground Water Quality Rule, and subsequent policies provide implementation guidance for reviewing and making recommendations on subdivision and drainage plans. The following policies provide legal authority for reviewing subdivision and drainage plans and making recommendations as necessary for storm water quality management:

- X Rules Governing Nonpoint Source Activities (Implementation Policy, IDAPA 16.01.02.350.01),
- X PM 98-2, Policy for No-Net Increase TMDLs (Water Quality Limited Waters and TMDLs, IDAPA 16.01.02.054/55), and
- X PM 98-3, Ground Water Quality Protection from Storm Water Runoff (Ground Water Quality Rule, IDAPA 16.01.11).

These policies provide guidance for incorporating storm water management practices and methods into land development for water quality protection. Collectively, the scope of implementation only applies to storm water practices and methods during the planning, design, or pre-construction stage.

EVALUATOR AND/OR REVIEWER

Local jurisdictions such as Boise City Public Works and the Ada County Highway District, do provide subdivision plans and specifications review for storm water drainage plans. The Idaho Department of Water Resources has the authority under the Underground Injection Control (UIC) Program to review and approve appropriate storm water controls when considered a Class V injection well according to IDAPA 37.03.03. However, where there are cases of lacking or insufficient review for water quality considerations, the DEQ can provide guidance as necessary. For example, where a TMDL has not sufficiently identified an authority to provide the necessary reviews of local subdivision drainage plans. This guidance is primarily suited toward assuring that storm water practices and methods are appropriately selected based on site-specific design suitability and targeted pollutants of concern. *Design review for storm water practices and methods is not provided for in this instance.*

Conducting drainage plan evaluations for every project is not realistic. The DEQ Regional Offices or other local public governmental entities are dependent upon mechanisms to assist in prioritizing projects. The Stormwater BMP Selection Suitability Decision Tree (or the Checklist) is a performance-based mechanism for identifying and prioritizing land development projects that present the greatest risk to impacting water quality. The Checklist is a tool for identifying projects that should be targeted for drainage plan evaluations because they present a special need. Screening is not considered a review, but rather, an opportunity to determine whether selected storm water practices and methods have been chosen appropriately based on design site suitability criteria.

Appropriate storm water practices and methods means that they are suitable for the physical conditions of a site. However, they must also be appropriate for removing targeted pollutants of concern. By selecting the appropriate storm water practices and methods, beneficial uses and thus water quality is protected. The Checklist is designed to screen projects that could have impacts to water quality and to focus limited resources on the evaluation of those selected storm water practices and methods, on a project-by-project basis.

Background information is necessary and should be filled in on Table 1 below, prior to working through the decision tree on pages 4-5 (Figure 1). The decision tree outlines the Checklist's (BMP suitability selection) process for evaluators and reviewers. The decision tree involves three levels that are differentiated by several factors. The total impervious surface area proposed by a project initially differentiates the three levels. Additionally, Levels 2 and 3 are both differentiated into whether the discharge is to a surface or subsurface water body. Level 3 is further differentiated from Level 2 by the percentage of impervious surface area for the proposed total project parcel. For example, a surface water BMP option is highly recommended for Level 3 land development projects with equal or greater than 50% impervious surface area. In cases where ground water discharge is imminent, advanced pretreatment becomes a necessity. Also, regardless of level, projects proposing water quality ponds and constructed wetlands should be evaluated by the DEQ. The decision tree for evaluators/reviewers is outlined in further detail on pages 6-7 in a checklist format (Table 2).

TABLE 1. BACKGROUND INFORMATION REQUIRED FOR THE EVALUATOR/REVIEWER DECISION TREE ON PAGES 4-5. THE STEPS IN PARENTHESES CORRESPOND TO STEPS IN THE DECISION TREE.

1. Is the Catalog used as the technical guidance and if so, which BMP is referenced? If not, which type of storm water practice or method is described? _____

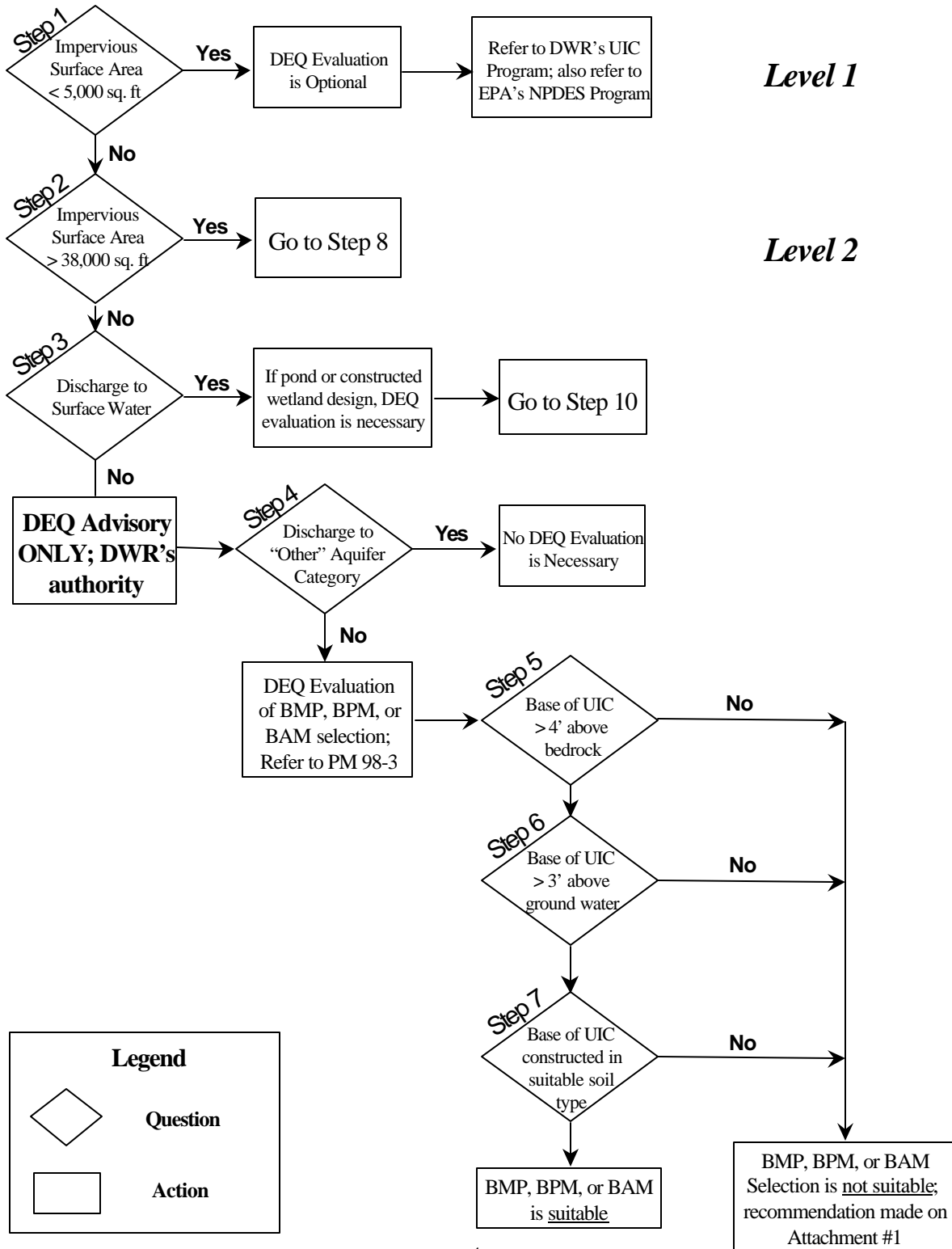
2. What is the proposed area of impervious surface coverage*? _____ square feet (**STEPS 1 and 2**)
* Impervious surface coverages include but are not limited to surfaces described as being covered by asphalt, concrete, pavement, a building structure (rooftops), and compacted soils (due to clearing and grading practices).
3. What is the percentage of site is impervious? _____% (**STEP 8**)
4. Does the discharge from the proposed stormwater practice or method go to surface or ground water?_____ (**STEPS 3, 4, and 9**) If discharging to a surface water body, what is the name and priority?_____ (**STEPS 10 and 11**) Is a TMDL completed? _____
4. What is depth to bedrock or parent material?_____ feet (**STEP 5**)
5. What is site=s depth to seasonal high (ground) water table?_____ feet (**STEP 6**)
6. What is the site=s soil hydrologic group or soil texture description based on Idaho=s Catalog or Natural Resource Conservation Service=s (SCS) TR-55 manual**?
_____ (**STEP 7**)

** As a result of urbanization, the soil profile may be considerably altered and the listed group classification may no longer apply. In these circumstances, use the following to determine soil hydrologic group (*HSG*) according to the *soil texture* of the new surface soil, provided that significant compaction has not occurred (Brackensiek and Rawls, 1983):

<u>HSG</u>	<u>Soil Textures</u>
A	Sand, loamy sand, or sandy loam
B	Silt loam or loam
C	Sandy clay loam
D	Clay loam, silty clay loam, sandy clay, silty clay, or clay

7. What is the drainage area in acres of the selected storm water practice or method?

Stormwater BMP Selection Suitability **Decision Tree**



Stormwater BMP Selection Suitability Decision Tree

Level 3

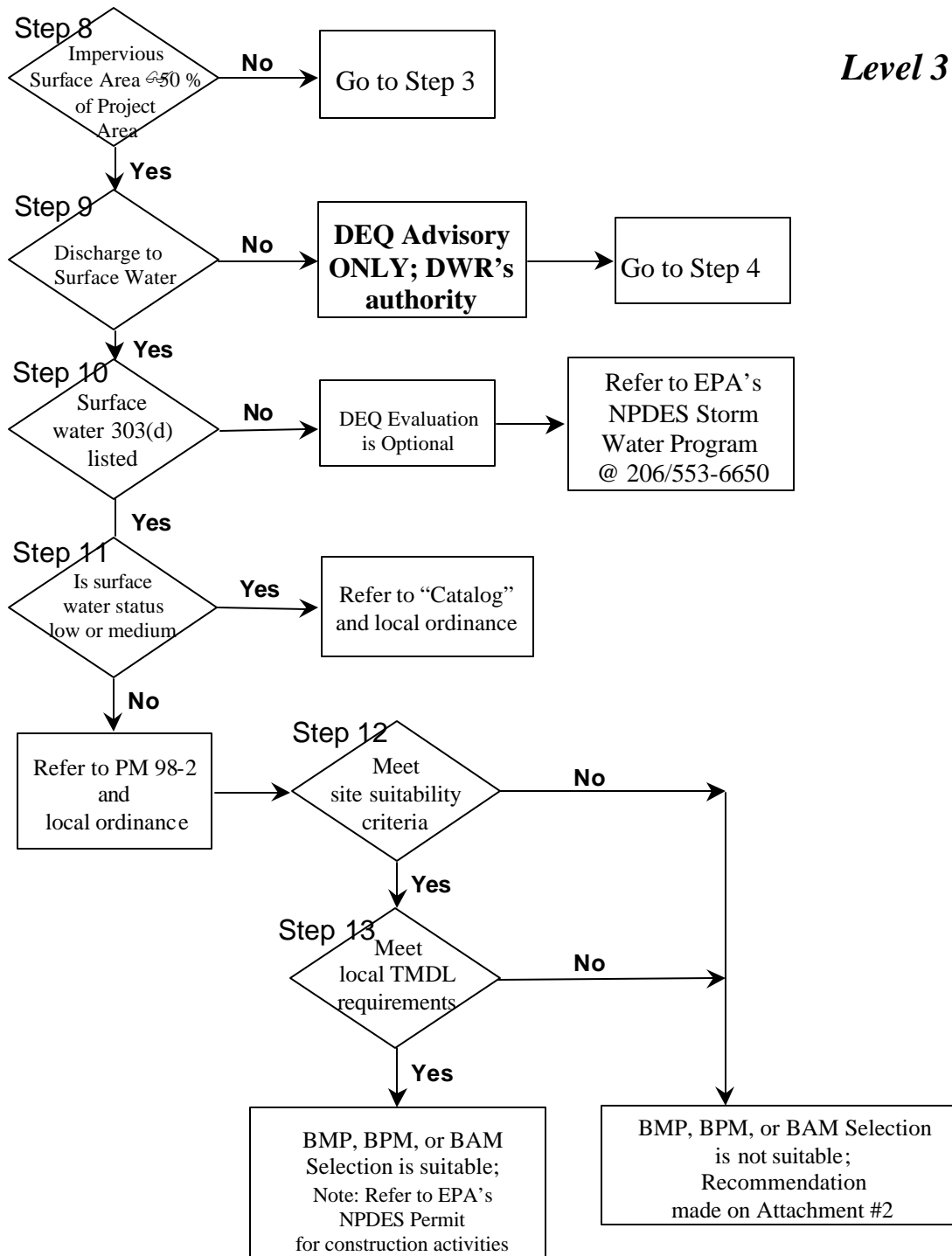


TABLE 2. LEVELS DESCRIBING SCREENING CRITERIA, REQUIREMENTS, AND PREFERRED RECOMMENDATIONS TO SUPPORT THE DECISION TREE FOR EVALUATORS AND REVIEWERS.

LEVEL 1

SCREENING CRITERIA

The proposed site development impervious surface area does not exceed 5,000 square feet (the 5,000-square-foot trigger corresponds roughly to the area of a small parking lot).

REQUIREMENTS

DEQ evaluation is optional.

COMMENTS AND RECOMMENDATIONS

A proposed commercial/industrial site development project qualifies for coverage under EPA=s NPDES Multi-sector Industrial Permit according to the *Catalog* (Appendix C).

A proposed site development project includes the design of a Class V injection well facility, system, or device for storm water control, refer plan and specs to the IDWR for review and approval.

LEVEL 2

SCREENING CRITERIA

A) Proposed site development impervious surface area is equal to or greater than 5,000 square feet **and** discharges to a ' 303(d) listed segment **or** to AGeneral@ or ASensitive@ Resource aquifer:

2.1) Surface treatment and disposal to a ' 303(d) listed segment:

low or medium priority listed segment, refer submitter to the use of a technical guidance such as the *Catalog* to follow the preferred standards for storm water management; **or** high priority listed segment, refer submitter to PM 98-2 or recognized local requirements authorized by a TMDL, and the use of a technical guidance such as the *Catalog* to follow the preferred standards.

2.2) Subsurface treatment and disposal to a AGeneral@ or ASensitive@ Resource aquifer:

The BMP, BPM, or BAM selection is suitable. The interface between the base of a Class V injection well system or device is:

Y **N** greater than 4-feet above bedrock, and

Y **N** greater than 3-feet above the seasonal Ahigh (ground) water table,@ and

Y **N** will be constructed within an appropriate ASCS soil type@ A or B.

The BMP, BPM, or BAM is not suitable.

B) The proposed site development does not discharge to a ' 303(d) limited segment or a AGeneral@ or ASensitive@ Resource aquifer; no DEQ evaluation is necessary.

REQUIREMENTS

For a proposed surface treatment and disposal facility, system, or device, recommendations were made to follow the standards of the *Catalog* or an equivalent technical reference; or The subsurface treatment and disposal facility, system, or device was **suitable**, recommendations were transferred to the IDWR or a District Health Department office via recommendations on Attachment #1 (page 11); or

The surface or subsurface treatment and disposal facility, system, or device was **not suitable**,

recommendations were made on Attachment #1 (page 11).

COMMENTS AND RECOMMENDATIONS

The proposed commercial/industrial site development project qualifies for coverage under EPA=s NPDES Multi-sector Industrial Permit according to the *Catalog* (Appendix C). Refer project manager to EPA Storm Water Program (206/553-8399).

LEVEL 3

SCREENING CRITERIA

Proposed site development impervious surface area is greater than 38,000 square feet and total impervious surface area is less than 50% of the parcel (The 38,000-square-foot trigger roughly corresponds to the area of one city block). [See AComments and Recommendations@ for sites equal or greater than 50 % total impervious surface area]

3.1) Surface treatment and disposal

The BMP, BPM, or BAM selection is suitable, where selection:

meets all specified ASite Suitability Criteria,@ according to *Catalog* Table 3-1; and
is appropriate for the ATargeted Pollutant@ of concern, according to the *Catalog* (Table 3-1)
and approved TMDL requirements.

3.2) Subsurface treatment and disposal to a AGeneral@ or ASensitive@ Resource aquifer:

The BMP, BPM, or BAM selection is suitable. The interface between the base of a Class V injection well system or device is:

Y N greater than 4-feet above bedrock, and

Y N greater than 3-feet above the seasonal Ahigh (ground) water table,@ and

Y N will be constructed within an appropriate ASCS soil type@ A or B.

The BMP, BPM, or BAM is not suitable.

REQUIREMENTS

The surface treatment and disposal facility, system, or device was suitable, a review and approval of plans and specifications was performed; or

The subsurface treatment and disposal facility, system, or device was suitable, review was transferred to the IDWR or a District Health Department office that is performing this function; or

The surface or subsurface treatment and disposal facility, system, or device was not suitable, recommendations were made on Attachment #2 (page 11).

COMMENT AND RECOMMENDATIONS

The proposed site development does not meet the Level 3 Ascreening criteria,@ use Attachment #2 (page 11) for additional comments and recommendations.

Where the proposed site development impervious surface area is greater than 38,000 square feet and total impervious surface area is equal or greater than 50% of the parcel, a surface water BMP option is highly recommended.

DESIGN PROFESSIONAL

Design professionals must use a practical approach to protect water quality from the effects of land development. A practical approach for water quality protection includes incorporating appropriate storm water practices and methods: Best Management Practices (BMPs), Best Practical Methods (BPMs), or Best Available Methods (BAMs) into land development projects.

In choosing appropriate storm water practices and methods, the aim is to fully protect beneficial uses. Thus, selection should focus on design suitability and targeted pollutant removal characteristics. A decision tree for design professionals (Figure 2, page 9) is included to assist in selecting appropriate or suitable storm water practices and methods for a land development project. This decision tree can also be used by evaluators/reviewers if necessary. Suitability refers to accepted limitations or restrictions of a storm water practice and method so that it fully protects beneficial uses based on site-specific physical conditions, as defined by the A Catalog of Storm Water Best Management Practices for Idaho Cities and Counties or an equivalent, locally-recognized technical guidance. The design professional should review Chapter 3 of the Catalog, specifically focusing on Table 3-1 (also contained on page 10 herein) in selecting appropriate storm water practices and methods.

Some of the most important considerations when selecting storm water practices and methods include site-specific physical conditions (factors such as soils, depth to seasonal high water table, slope, and water availability), pollutant removal characteristics, soil erosion, design storms for sizing water quality, and maintenance.

- X *Site-specific physical conditions (site suitability criteria)*: soil type according to Soil (Natural Resource) Conservation Service's hydrologic soil group classification, depth to seasonal high water table, which cannot be less than a 3-foot minimum, slope sensitivity, and water availability for practices and methods that rely on vegetation or a permanent water pool for pollutant removal.
- X *Pollutant removal characteristics (targeted pollutants)*: should be selected based on specific pollutants of concern and the removal effectiveness of a particular storm water practice or method.
- X *Soil erosion*: regardless of climate conditions, higher-than-normal sediment loads will affect the performance and maintenance requirements of storm water practices and methods.
- X *Design storms for sizing water quality*: differs from that associated with water quantity design storms. Most water quality impacts are related to small, frequent events, generally associated with 2-year storms or less. These smaller storm events carry the vast majority of runoff and suspended pollutants to receiving waters, even in arid to semi-arid climates.
- X *Maintenance*: is essential for the continued operation for the duration or expected life-cycle of a storm water practice or method.

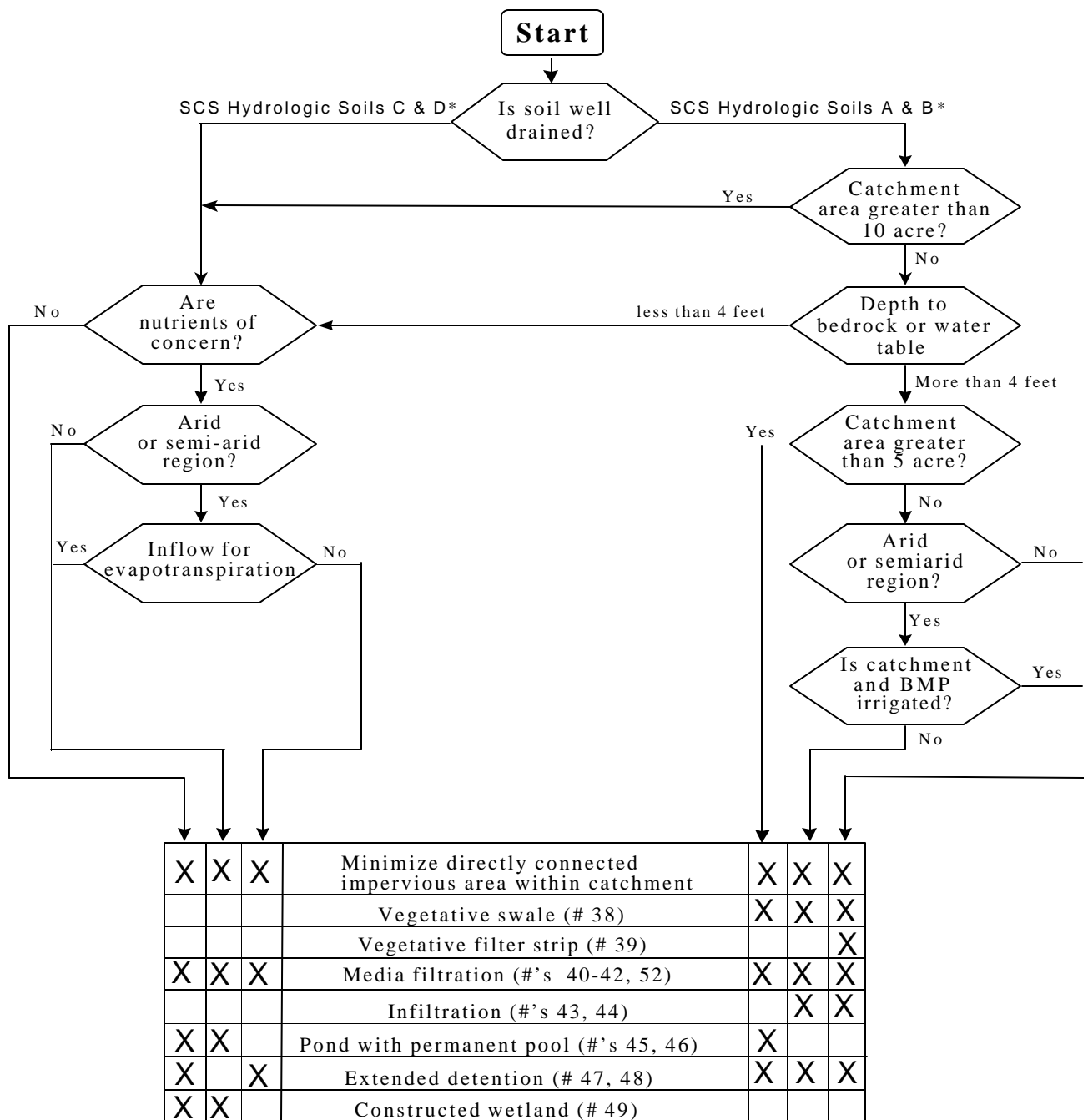


Figure 2. The design professional's decision tree for selecting appropriate storm water practices and methods. The numbers in the above box refer to permanent storm water practices and methods contained in Chapter 5 of the Catalog, as listed by numbered fact sheet. Also, Catalog's Table 3-1 contains targeted pollutants and site suitability criteria (page 9 herein). Based on page 181 of *Urban Runoff Quality Management* (1998, Water Environment Federation and American Society of Civil Engineers). *SCS (or Soil Conservation Service) = Natural Resource Conservation Service.